

# Notice of Allowability

Application No.

09/902,021

Examiner

Narayanswamy Subramanian

Applicant(s)

MATHEWS ET AL.

Art Unit

3624

*nlly*

## -- The MAILING DATE of this communication appears on the cover sheet with the correspondence address--

All claims being allowable, PROSECUTION ON THE MERITS IS (OR REMAINS) CLOSED in this application. If not included herewith (or previously mailed), a Notice of Allowance (PTOL-85) or other appropriate communication will be mailed in due course. **THIS NOTICE OF ALLOWABILITY IS NOT A GRANT OF PATENT RIGHTS.** This application is subject to withdrawal from issue at the initiative of the Office or upon petition by the applicant. See 37 CFR 1.313 and MPEP 1308.

1. ☒ This communication is responsive to 7/6/2004.
2. ☒ The allowed claim(s) is/are 1-27.
3. ☒ The drawings filed on 26 August 2002 are accepted by the Examiner.
4. ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
  - a) ☐ All   b) ☐ Some\*   c) ☐ None   of the:
    1. ☐ Certified copies of the priority documents have been received.
    2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
    3. ☐ Copies of the certified copies of the priority documents have been received in this national stage application from the International Bureau (PCT Rule 17.2(a)).

\* Certified copies not received: \_\_\_\_\_.

Applicant has THREE MONTHS FROM THE "MAILING DATE" of this communication to file a reply complying with the requirements noted below. Failure to timely comply will result in ABANDONMENT of this application.  
**THIS THREE-MONTH PERIOD IS NOT EXTENDABLE.**

5. ☐ A SUBSTITUTE OATH OR DECLARATION must be submitted. Note the attached EXAMINER'S AMENDMENT or NOTICE OF INFORMAL PATENT APPLICATION (PTO-152) which gives reason(s) why the oath or declaration is deficient.
  6. ☐ CORRECTED DRAWINGS ( as "replacement sheets") must be submitted.
    - (a) ☐ including changes required by the Notice of Draftsperson's Patent Drawing Review ( PTO-948) attached
      - 1) ☐ hereto or 2) ☐ to Paper No./Mail Date \_\_\_\_\_.
    - (b) ☐ including changes required by the attached Examiner's Amendment / Comment or in the Office action of Paper No./Mail Date \_\_\_\_\_.
- Identifying indicia such as the application number (see 37 CFR 1.84(c)) should be written on the drawings in the front (not the back) of each sheet. Replacement sheet(s) should be labeled as such in the header according to 37 CFR 1.121(d).
7. ☐ DEPOSIT OF and/or INFORMATION about the deposit of BIOLOGICAL MATERIAL must be submitted. Note the attached Examiner's comment regarding REQUIREMENT FOR THE DEPOSIT OF BIOLOGICAL MATERIAL.

### Attachment(s)

- |   |  |
|---|--|
| 1. <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)   | 5. <input type="checkbox"/> Notice of Informal Patent Application (PTO-152)            |
| 2. <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)                                | 6. <input type="checkbox"/> Interview Summary (PTO-413),<br>Paper No./Mail Date _____. |
| 3. <input type="checkbox"/> Information Disclosure Statements (PTO-1449 or PTO/SB/08),<br>Paper No./Mail Date _____ | 7. <input checked="" type="checkbox"/> Examiner's Amendment/Comment                    |
| 4. <input type="checkbox"/> Examiner's Comment Regarding Requirement for Deposit<br>of Biological Material          | 8. <input checked="" type="checkbox"/> Examiner's Statement of Reasons for Allowance   |
|   | 9. <input type="checkbox"/> Other _____.   |

### **DETAILED ACTION**

1. This communication is in response to the appeal brief filed on July 6, 2004. Applicant's arguments are persuasive and the Examiner withdraws the finality of rejection made in the office action mailed on February 5, 2004. Claims 1-27 are pending.

### **EXAMINER'S AMENDMENT/COMMENT**

2. During an interview with Applicant's representative Mr. Andrew Spence on September 23, 2004, Attorney Spence agreed to the following amendments to claims 1 and 19 to overcome rejections under 35 USC 101. The amended claims are:

1. **(Currently Amended)** A computer-implemented method for performing a contingent claim valuation comprising:

determining a present value distribution of contingent future benefits attributable to the exercise of the contingent claim at a subsequent time, wherein determining the present value distribution of contingent future benefits comprises discounting a distribution of contingent future benefits according to a first discount rate;

determining a present value of a contingent future investment required to exercise the contingent claim at the subsequent time based upon a second discount rate that need not equal the first discount rate; and

determining a value of the contingent claim based upon the present value distribution of contingent future benefits and the present value of the contingent future investment,

wherein at least one of the determining steps is performed by a processing element.

19. **(Currently Amended)** A computer program product for performing a method of valuing a contingent claim, the computer program product comprising:

a computer-readable storage medium having computer-[readable] executable program code portions stored therein for performing the method, the method comprising:

determining a present value distribution of contingent future benefits attributable to the exercise of the contingent claim at a subsequent time, wherein determining a present value distribution comprises discounting a distribution of contingent future benefits according to a first discount rate;

determining a present value of a contingent future investment required to exercise the contingent claim at the subsequent time based upon a second discount rate that need not equal the first discount rate; and

determining a value of the contingent claim based upon the present value distribution of contingent future benefits and the present value of the contingent future investment.

***Allowable Subject Matter***

3. Claims 1-27 are allowed.

4. The following is an examiner's statement of reasons for allowance:

The claimed invention pertains to a computer-implemented method, system and a computer program product for performing a contingent claim valuation comprising determining a present value distribution of contingent future benefits attributable to the exercise of the contingent claim at a subsequent time using a first discount rate, determining a present value of a contingent future

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investment required to exercise the contingent claim at the subsequent time based upon a second discount rate, and determining a value of the contingent claim based upon the present value distribution of contingent future benefits and the present value of the contingent future investment.

The closest prior art Glasserman et al (US Patent 6,381,586) in combination with Shepherd (US Patent 6,157,918) and Makivic (US Patent 6,061,662) teaches all the features of the claimed invention except the steps of determining the present value distribution of contingent future benefits and determining a present value of a contingent future investment based upon a second discount rate that need not equal the first discount rate.

The searches separately made by the examiner and the Electronic Information Center on the databases of USPTO, European Patent Office, Japanese Patent Office, Derwent Database, Non-Patent literature Databases do not show any patent or non-patent literature regarding ideas, projects or applications disclosed by the instant invention.

The following list identifies the most relevant prior art pertinent to the claimed invention:

Glasserman et al (US Patent 6,381,586) in combination with Shepherd (US Patent 6,157,918) and Makivic (US Patent 6,061,662) teaches all the features of the claimed invention except the steps of determining the present value distribution of contingent future benefits and determining a present value of a contingent future investment based upon a second discount rate that need not equal the first discount rate.

Uenohara et al (EP 1178416 A1) discloses a system for correctly evaluating a price distribution and a risk distribution for a financial product or its derivatives by introducing a probability density function generated with a Boltzmann model. Uenohara fails to disclose most of the features of the claimed invention.

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Shapiro, Alan (Modern Corporate Finance) discloses a feature of using two different discount rates to compute the value of two cash flows of differing risks. Shapiro however fails to disclose the steps of determining the present value distribution of contingent future benefits and determining a present value of a contingent future investment based upon a second discount rate that need not equal the first discount rate.

Thus, the Examiner considers the novelty of the invention to be a computer-implemented method for performing a contingent claim valuation including the steps of determining the present value distribution of contingent future benefits and determining a present value of a contingent future investment based upon a second discount rate that need not equal the first discount rate.

Any comments considered necessary by applicant must be submitted no later than the payment of the issue fee and, to avoid processing delays, should preferably accompany the issue fee. Such submissions should be clearly labeled "Comments on Statement of Reasons for Allowance."

### ***Conclusion***

5. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Dr. Narayanswamy Subramanian whose telephone number is (703) 305-4878. The examiner can normally be reached Monday-Thursday from 8:30 AM to 7:00 PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Vincent Millin can be reached at (703) 308-1065.

The fax number for Formal or Official faxes and Draft or Informal faxes to the Patent Office is (703) 872-9306.

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Any inquiry of a general nature or relating to the status of this application should be directed to the Group receptionist whose telephone number is (703) 308-1113.

N. Subramanian  
September 23, 2004

*for Elizabeth A. Lato Primary Examiner*  
for Vincent Millin  
SPE, Art Unit 3624